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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,779

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EXAMINER

DOLLINGER, MICHAEL M

ART UNIT

PAPER NUMBER

1766

NOTIFICATION DATE

DELIVERY MODE

10/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/594,779	<b>Applicant(s)</b> FUJIBAYASHI ET AL.	
	<b>Examiner</b> MIKE DOLLINGER	<b>Art Unit</b> 1766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-7, 15-17, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-7, 15-17, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 5, 6, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinsho et al (US 2003/0125479 A1).
2. Kinsho discloses resin particles for use as slush molding resin [0001] having a structure such that resin particle (A) composed of resin (a) adheres to the surface of a resin particle (B) composed of a resin (b) [0015]. The resin particle (A) has a volume average particle diameter of 0.01 to 30  $\mu\text{m}$  [0018] and the resin (a) is at least one resin selected from a group including polyurethane and vinyl resin [0024]. The vinyl resin includes copolymers including carboxyl group containing vinyl monomers including (meth)acrylic esters [0040-0041] and hydroxyl group containing vinyl monomers [0048] including hydroxyethyl (meth)acrylate [0049]. The resin (a) has a melting point of over 50°C and preferably over 80°C [0126]. However, the resin (a) preferably has a glass transition temperature of up to 300°C [0123] and a crosslinked structure [0126] which would indicate a melting temperature above 300°C or possibly no melting temperature at all, respectively. The resin particle (B) has a volume average particle diameter of 0.1 to 300  $\mu\text{m}$  [0018] and the resin (b) is at least one resin selected from a group including polyurethane [0024]. The resin (b) may be the chosen from the same resins as resin (a)

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[0190] which may be thermoplastic or thermosetting [0034]. When the resin particle is used for slush molding, the melting point of resin (b) is generally 0°C to 200°C [0192] and is therefore capable of melting at 200°C. The resin particle for slush molding comprises preferably 0.1 to 50 weight % of resin particle (A) and 50 to 99.9 weight percent of particle (B) [0278]. The disclosed particle (B) reads on the claimed particle (B) and the disclosed particle (A) corresponds to the claimed particle (E). Several additives may be incorporated into the composition [0265] wherein they may be added after the formation of the resin particles [0266].

3. Regarding the limitation in claim 5 requiring that the powders (A) and (B) be dry-blended, this is a product-by-process limitation. The methods by which claimed compositions are created by are not pertinent, unless applicant can show a different product is produced. However, Kinsho discloses a process wherein the aqueous dispersion is dried [0272]. This dried product appears to be identical to the product of applicants' claims.

4. While Kinsho does not disclose the claimed composition with sufficient specificity to anticipate the claims, the claims are still obvious over the disclosure. If Applicant argues that the claimed embodiments are not disclosed with sufficient specificity and that examiner is picking and choosing with improper hindsight, Examiner notes that mere fact that a reference suggests a multitude of possible combinations does not in and of itself make any one of those combinations less obvious. See *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kinsho et al (US 2003/0125479 A1) with further evidence provided by Toyama et al (US 4,686,138).

6. Kinsho, discussed above, does not specifically disclose silica fine powder as an additive. Kinsho does disclose in Example 1 the addition of an antiblocking agent SYLLOID 978 [0325].

7. Toyama discloses that SYLLOID 978 is a synthetic silica fine powder [col 10 lines 20-22].

8. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinsho et al (US 2003/0125479 A1) in view of Suling et al (US 4,233,424).

9. Kinsho, discussed above, does not disclose the resin particles (A) as crosslinked by an organic diisocyanate. Kinsho does disclose, however, that the resin particle (A) has a crosslinked structure [0126].

10. Suling discloses a two phase bead polymer having an average bead diameter of 10 to 120  $\mu\text{m}$  comprising at least one methacrylic acid ester and optionally hydroxyalkyl ester of methacrylic acid [abstract]. Suling teaches that it is known in the art that the toughness of polymethyl methacrylate additives can be improved by crosslinking with polyisocyanates that react with hydroxyl groups on the vinyl polymer chain [col 1 line

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31-45]. Suling discloses suitable diisocyanates as aliphatic diisocyanates [col 5 lines 34-37] which read on the claimed organic diisocyanates.

11. It would have been obvious to one having ordinary skill in the art the time the invention was made to have prepared a powdered resin composition comprising a thermoplastic polyurethane resin powder (B) and a fine particle powder (E) polymerized from alkyl (meth)acrylate and hydroxyethyl methacrylate and crosslinked with an organic diisocyanate because Kinsho teaches that it is within the skill of the art to prepare a powdered resin composition comprising a thermoplastic polyurethane resin powder (B) and a crosslinked fine particle powder (A) polymerized from alkyl (meth)acrylate and hydroxyethyl methacrylate and Suling teaches that it is within the skill of the art to crosslink a vinyl polymer particle containing hydroxyl functions with a polyisocyanate. One would have been motivated to use crosslink the particle powder (A) of Kinsho with a polyisocyanate because Suling teaches that the toughness of the polymeric additives is improved. Absent any evidence to the contrary, there would have been a reasonable expectation of success using the polyisocyanate of Suling as the crosslinker for the particle powder (A) of Kinsho.

### ***Response to Arguments***

12. Applicant's arguments filed 09/17/2010 have been fully considered but they are not persuasive.

13. Applicants argue that there is a difference between the claimed powdered resin composition and that of Kinsho because the claimed particle (B) and (E) are dry

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blended and are a simple mixture of (B) and (E) particles not adhered to one another while the composition of Kinsho contains particles (A) and (B) adhered to one another which is excluded by the claim requirement that powders (B) and (E) be "dry-blended". This argument is not convincing. Examiner had argued that Kinsho reads on the claims because 1) dry blending is a product by process limitation which is only relevant towards the limitations it implies are present in the final product and the aqueous dispersion once dried reads on a dry-blended mixture and 2) if applicant argues that the two particles must be separate then Kinsho discloses a method for cleaving the bond between the particles. Applicants arguments regarding rationale 2) have been considered and are convincing, that rationale has been withdrawn from the rejection. However, rationale 1) remains in effect because the product-by-process limitation "dry-blended" does not imply that the final mixture does not contain some or all of the particles adhered to one another. "Dry-blended" only implies an absence of water during blending. Particles may attach to one another during dry blending. This appears to be the case in Applicants' specification: Example 1 is a resin powder composition (S1) with an average particle diameter of 152  $\mu\text{m}$  [0124] prepared from dry blending at room temperature a methyl methacrylate-ethylene glycol dimethacrylate copolymer fine particle powder (E) with average particle diameter 20  $\mu\text{m}$  with a thermoplastic polyurethane resin powder (B-1) with an average particle diameter of 151  $\mu\text{m}$  [0120]. Here two powders are dry-blended to form a powder mixture with a larger diameter. Furthermore, the particles of (A) and (B) of Kinsho are merely "adsorbed" to one another and not in anyway externally crosslinked through chemical bonds. Kinsho

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describes the particles as "statically charged" to one another and one would expect the same static charges in Applicants dry blended mixture. Therefore the claimed product would be to be no different than the product of Kinsho.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MIKE DOLLINGER whose telephone number is (571)270-5464. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/mmd/

/RANDY GULAKOWSKI/  
Supervisory Patent Examiner, Art Unit 1766